

## EDI—The Next Generation

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Victor S. Wheatman  
Manager, EDI Program—U.S.  
INPUT



## EDI—The Year Past



Observations



*EDI as Religion*



"Missionary Sell"

Dedicated Volunteers

INPUT

NOTES:

ECO4-VW1-1



## Varieties of EDI

Mainline -

Purchasing  
Logistics  
EFT + Data

EMCS/ECS -

Medical Claims

Interface -

Insurance

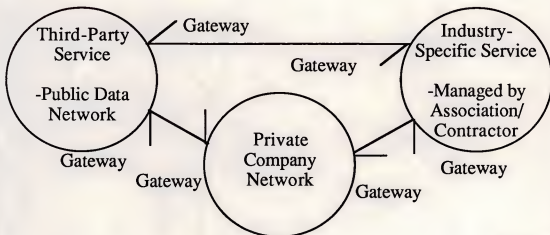
INPUT

NOTES:

ECO4-VW1-2



## Three Types of EDI Networks



INPUT

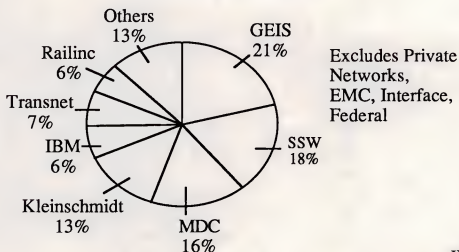
NOTES:

ECO4-VW1-3





## EDI Network/Processing Service Market Shares



NOTES:

ECO4-VW1-4



## GEIS

- Aggressive
- Worldwide Alliances, Agents
- EDI/PETROEX
- Design✕Express

INPUT

NOTES:

ECO4-VW1-5



## SSW Ordernet

- Grocery
- Drugs, Med/Surg
- Hard Goods
- Service Merchants
- Logistics
- Software

## Telenet

INPUT

NOTES:

ECO4-VW1-6



## McDonnell Douglas EDI\*Net

- Grocery
- Software Certification
- EDI II—Delayed
- "The Family Jewels"
- Logistics
- Cross Industry

INPUT

NOTES:

ECO4-VW1-7





## IBM

- Information Network—SNA
- Intercontinental Services
- Internal Use
- Insurance, Health Care,  
Electronics, Retail, Etc.
- ExpEDItE Family

INPUT

NOTES:

ECO4-VW1-8



## AT&T

- ~~Net 1000~~
- AT&T Mail—X.400 EDI
- CDC—RediAccess
- Turnkey Systems—RIVET

INPUT

NOTES:

ECO4-VW1-9



The Year Past

Service Entries

- AT&T
- Compuserve
- Martin Marietta
- Western Union
- Sears

INPUT

NOTES:

EC04-VW1-10



## EDI—The Year(s) Ahead

### Services—New Entrants

- ADP
- BOCs
- NDC
- EDS

### "Secondary" Players Find Niches

INPUT

NOTES:

ECO4-VW1-11





## Harbinger

- Low Cost PC Software
- Interconnect through Harbinger's Network
- Sold to Small Suppliers of Large Companies
- Adding EDI/EFT Services

INPUT

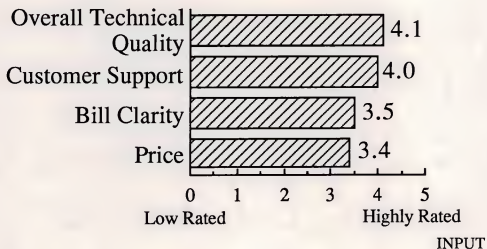
NOTES:

ECO4-VW1-12



## User Rating—Third-Party Networks

Averages—All Networks

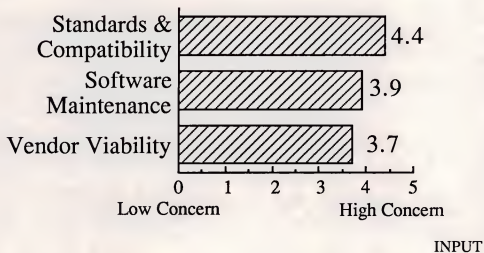


NOTES:

ECO4-VW1-13



## EDI User Issues and Concerns

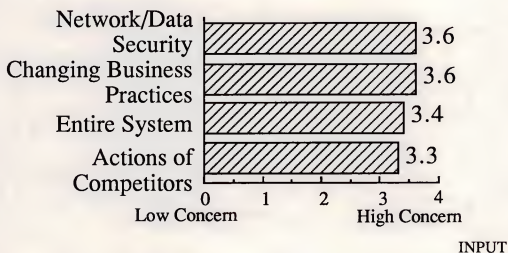


NOTES:

ECO4-VW1-14



## EDI User Issues and Concerns



NOTES:

ECO4-VW1-15





The Year Past

Software Entries

The "Majors": ASK, Pansophic, M+D  
Join MSA

The "Minors": Too Many to Mention

Missing: ~~Apple Software~~

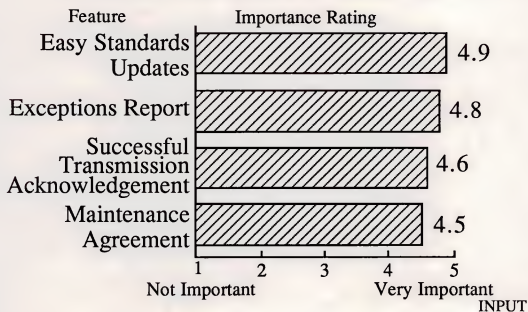
INPUT

NOTES:

ECO4-VW1-16



## Software Features Importance



NOTES:

ECO4-VW1-17



## Leading EDI Software

- GEIS
- TranSettlements
- MSA
- ACS
- SSW/Ordernet
- EDI, Inc.
- Metro-Mark
- Supply Tech

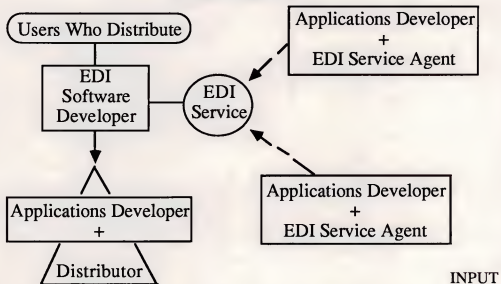
INPUT

NOTES:

ECO4-VW1-18



## Participants are Forming Alliances



NOTES:

ECO4-VW1-19





## EDI In Discrete Manufacturing

Segment	Activity Summary
Auto	EDI Essential to Reduce Costs; "Big 3" Private Nets moving to Public Standards
Electronics	EDX Conforms to X12

INPUT

ECO4-VW1-20



## EDI In Discrete Manufacturing

Segment	Activity Summary
Telecommuni- cations Equipment	TCIF Just Starting - Promoting X12 and Bar Coding
Apparel	EDI Tied to "Crafted with Pride in the USA"

INPUT

ECO4-VW1-21



## EDI In Process Manufacturing

Segment	Activity Summary
Oil/Gas	COPAS Integrating EDI; Working on Unique Needs
Chemicals	CIDX Used by 30+ Companies

INPUT

ECO4-VW1-22



## EDI In Process Manufacturing

Segment	Activity Summary
Paper Products	EMLINK on GEISCO - Trade Association Product
Metals	Growing List of ANSI Product Code Descriptors

INPUT

ECO4-VW1-23





## EDI In Distribution

Segment	Activity Summary
Groceries	UCS Used by Most Large Firms
Office Products	Industry Association Project (ICOPS) Used by 40 Wholesalers, Large Dealers, and Manufacturers

INPUT

ECO4-VW1-24



## EDI In Distribution

Segment	Activity Summary
Warehousing	WINS Standard is Similar to UCS
General	Large Distributors and Mass Merchandisers (McKesson, K-Mart) Using Private Networks

INPUT

ECO4-VW1-25



## EDI In Transportation

Segment	Activity Summary
Rails	Large Companies Using Private Systems, Industry Association RCS, and Kleinschmidt
Trucking	60-200 Firms Using EDI
Ocean	U.S. Customs Promoting EDI to Cut Paperwork

INPUT

ECO4-VW1-26



## EDI In Medical Products And Services

Segment	Activity Summary
Medical Supplies	Captive Systems Best Known: AHS
Optometry	TOP Network Helping Independents Compete Against Retail Chains

INPUT

ECO4-VW1-27





## EDI In Medical Products And Services

Segment	Activity Summary
Pharmaceuticals	Wholesalers Active for 15 Years; Proprietary Standards Migrating to X12 for Entire Industry

INPUT

ECO4-VW1-28



## EDI In Services

Segment	Activity Summary
Overnight Courier	EDI Used to Improve Customer Service to High-Volume Users
Banks	Growing Interest as Users, Uncertainty as Service Providers

INPUT

ECO4-VW1-29



## EDI In Services

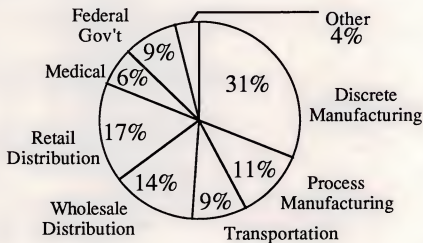
Segment	Activity Summary
Health Claims	UB 82 and HCFA Formats; Growing Usage
Insurance	Industry Association Improving Interface/ Methods between Independent Agents and Carriers

INPUT

ECO4-VW1-30



## Vertical Market EDI End User Expenditures—1987 Network Services



INPUT

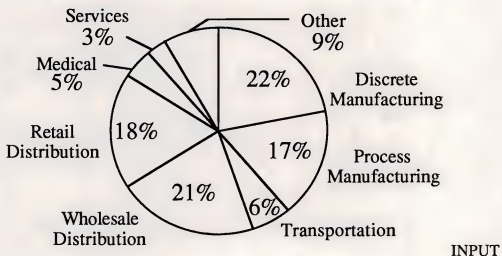
NOTES:

ECO4-VW1-31





## Vertical Market EDI End User Expenditures—1993 Network Services



NOTES:

ECO4-VW1-32



# EDI CASE STUDY

## LEVI-STRAUSS

INPUT

ECO4-VW1-33



## Levi-Strauss

- 17,000 Retailers—200,000 Stores
- Retail Electronic Services—  
a Marketing Group
- Also Responsible for Supplier EDI

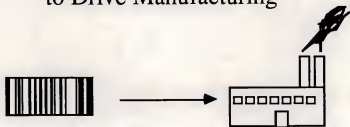
INPUT

ECO4-VW1-34



Levi-Strauss

**Key Concept:**  
Capture POS Data  
to Drive Manufacturing



INPUT

ECO4-VW1-35





Levi-Strauss

### Retail Services:

- Sell Through Analysis and Reporting System (STARS)
- Model Stock Management
- Retailer EDI (REDI)
- Purchase Order Reconciliation

INPUT

ECO4-VW1-36



Levi-Strauss

## Benefits:

- Improved Turns
- Fewer Stock Outs
- Enhanced Retailer Relations

INPUT

ECO4-VW1-37



# EDI CASE STUDY

## HEWLETT PACKARD

INPUT

ECO4-VW1-38



H-P

- 56 Plants in 15 Countries
- Decentralized → Integrated
- Entrepreneurial/Complex

INPUT

ECO4-VW1-39





H-P

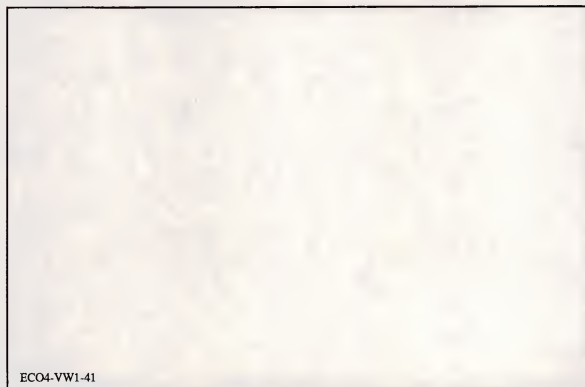
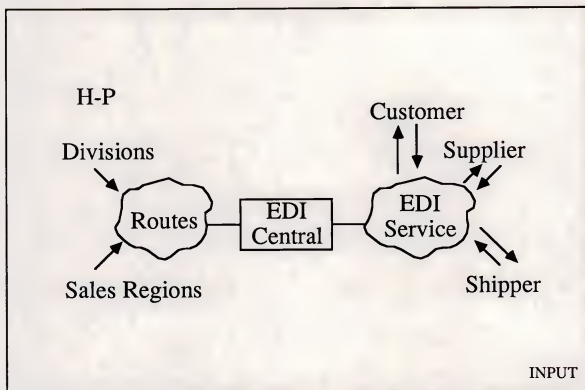
## EDI Approach

Steering Committee	-Policies
EDI Central	-Technical
Business Units	-Unit Interfaces
	-Implementation
	Partner Relations

INPUT

EC04-VW1-40







H-P

## EDI Goals

- Industry Leader
- Improve Customer Satisfaction
- "One Company" Image
- Eliminate Duplication

INPUT

ECO4-VW1-42



H-P

## Recommendations

- Centralize Approach through Steering Committee
- Participate in Standards Groups
- Watch Secondary and Third-Order Issues
- "Spread the Gospel"

INPUT

ECO4-VW1-43





**EDI CASE STUDY**

**FIRST NATIONAL  
BANK OF CHICAGO**

INPUT

ECO4-VW1-44



First Chicago

**President's Mandate:**

"We Will Do EDI"

- Purchasing
- Potential Service

INPUT

ECO4-VW1-45



First Chicago

1985: No Supplier Was Ready

So: Loaned Software  
Underwrote Costs  
Free Training & Installation

INPUT

ECO4-VW1-46



First Chicago

## Cost Benefit Analysis (1985):

Would Cost More—Not Less

- Dual Systems
- But Costs have Moderated

INPUT

EC04-VW1-47





First Chicago

## Implementation

- 65 Staff on Project
- "Bilingual" Users' Guide
- 25-Point Software and Network Evaluation

INPUT

ECO4-VW1-48



First Chicago

## Transactions

	<u>Electronic</u>	<u>Paper</u>
1986	1,200	1 million
1987	4,800	
1988	20,000	50,000

INPUT

ECO4-VW1-49



First Chicago

## Benefits

- \$2.5 Million in Annual Savings
- Enhanced Control/Monitoring—  
"Everything By Registered Mail"
- Experience Applied to EDI Services

INPUT

ECO4-VW1-50



## Texas Instruments

- Centralized Worldwide
- T I's Own Network
- Provides "Free" Consulting
- Evaluating Graphics and Catalogs

INPUT

NOTES:

ECO4-VW1-51





## WESCO

- Survey Customer Inventory Levels  
→ Automatic Replacement Orders
- Access Through Any Branch—  
Redistributes
- VAN or Direct

INPUT

NOTES:

ECO4-VW1-52



## IBM

- 1991 Goal—2,000 EDI Suppliers
- Save \$60 Million Annually

## DEC

- EDI Executive Committee
- Electronic Store

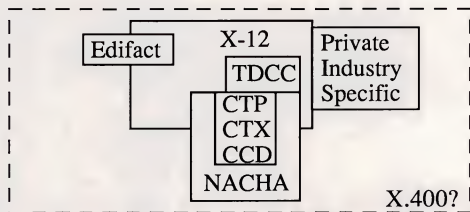
INPUT

NOTES:

ECO4-VW1-53



## EDI Standards Relationships



INPUT

NOTES:

ECO4-VW1-54



## Standards Interfusion

Proprietary —————> X12  
Industry Specific

Pro: "Go with the Flow"

Con: Ease of Change

When: Now

INPUT

NOTES:

ECO4-VW1-55





## Standards Interfusion

UCS  $\longleftrightarrow$  X12

Pro: Companies Now Using Both

Con: "Ain't Broke—Why Fix It?"

When: 2-5 Years

INPUT

NOTES:

ECO4-VW1-56



## Standards Interfusion

TDCC ↔ X12

Pro: Would Solve Coordination  
Problems

Con: Work Load Issues

When: 4-10 Years

INPUT

NOTES:

ECO4-VW1-57



## Standards Interfusion

X12  $\longleftrightarrow$  Insurance  
(IIR/Acord)

Pro: Useful in Mortgage Banking,  
Transportation, Others?

Con: Coordination Issues

When: 2 Years (Real Estate)

INPUT

NOTES:

ECO4-VW1-58



## Standards Interfusion

X12 → Edifact 400

Pro: Edifact—"The True Faith"

Con: X.400 Cycle Is 4 Years  
Varieties of X.400?

When: 2-10 Years

INPUT

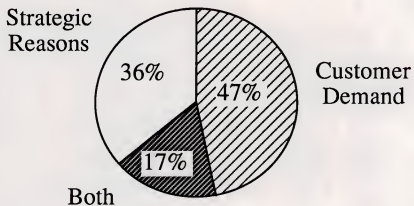
NOTES:

ECO4-VW1-59





## Why Was EDI Implemented?



INPUT

NOTES:

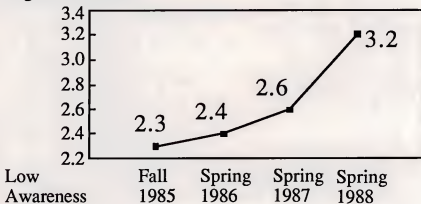
ECO4-VW1-60



Forecast Factors

## EDI Awareness Is Growing

High Awareness



INPUT

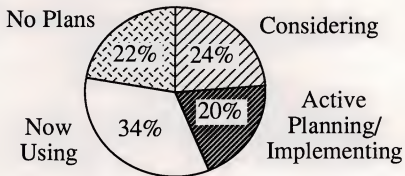
NOTES:

ECO4-VW1-61



Forecast Factors

**EDI Status  
(IS Managers)**



INPUT

NOTES:

ECO4-VW1-62



Forecast Factors

Transaction Growth  
User's Average Response

1986-1987	1987-1988
181%	156%

INPUT

NOTES:

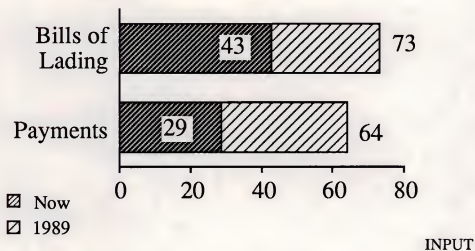
ECO4-VW1-63





Forecast Factors

### Transaction Type Growth (Percent)



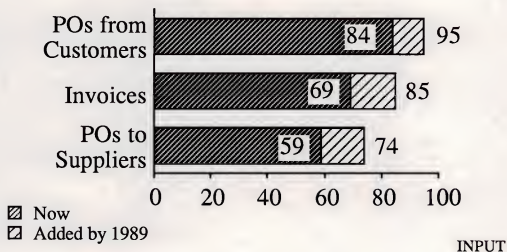
NOTES:

ECO4-VW1-64



Forecast Factors

### Transaction Type Growth (Percent)



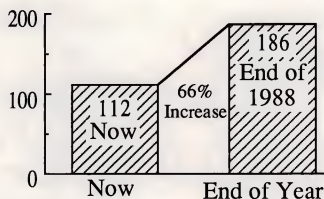
NOTES:

ECO4-VW1-65



Forecast Factors

## Number of EDI Trading Partners



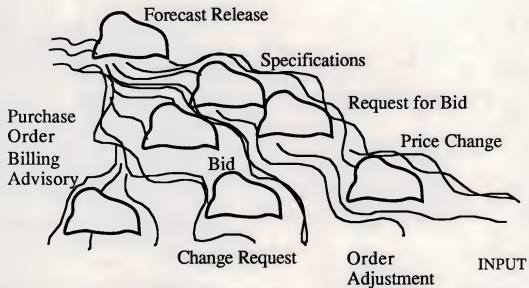
INPUT

NOTES:

ECO4-VW1-66



## The Cascade Effect



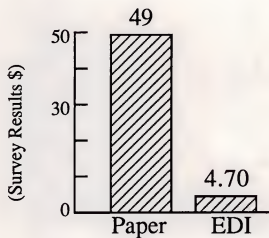
NOTES:

ECO4-VW1-67





## Paper versus Electronic Transactions



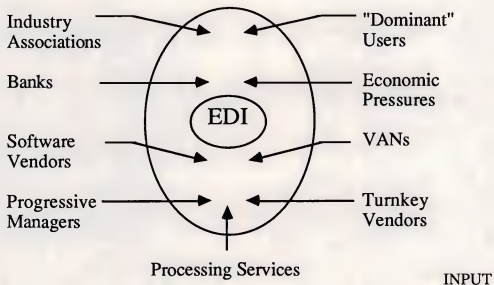
INPUT

NOTES:

ECO4-VW1-68



## Fertilizing the EDI Embryo

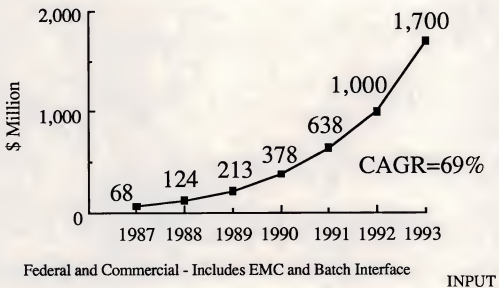


NOTES:

ECO4-VW1-69



## EDI Network Services

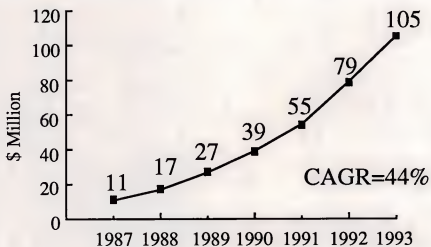


NOTES:

ECO4-VW1-70



## Commercial EDI Software Market



Excludes EMC, Interface

INPUT

NOTES:

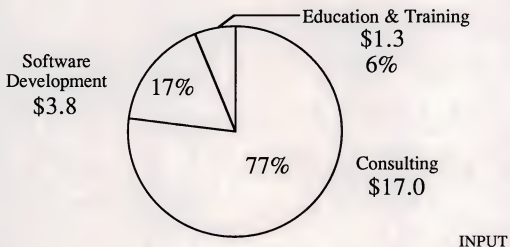
ECO4-VW1-71





## EDI Professional Services Components

1988

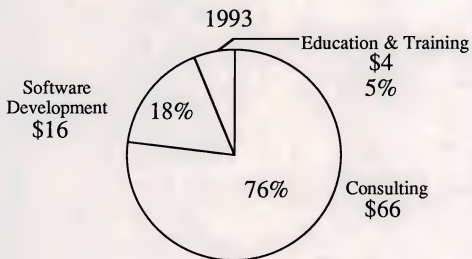


NOTES:

ECO4-VW1-72



## EDI Professional Services Components



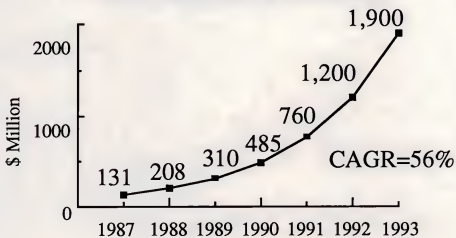
INPUT

NOTES:

ECO4-VW1-73



## EDI Market Forecast



Network/Processing Services, Software, Professional  
Services, Federal and Commercial Markets

INPUT

NOTES:

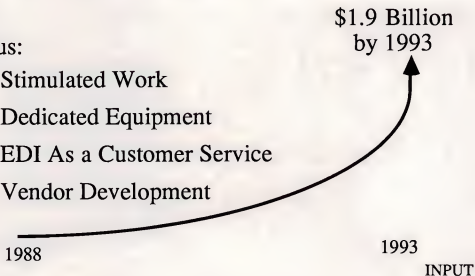
ECO4-VW1-74



## The EDI "Shadow" Market

Plus:

- Stimulated Work
- Dedicated Equipment
- EDI As a Customer Service
- Vendor Development



NOTES:

ECO4-VW1-75





Victor S. Wheatman  
EDI Program Manager  
INPUT

Victor S. Wheatman is responsible for managing INPUT's Electronic Data Interchange Program. He specializes in research and analysis in the telecommunications, electronic data interchange, and office systems markets. Prior to joining INPUT, he held marketing and project management positions with an independent market research firm and was an independent telecommunications consultant to several U.S. corporations. His earlier career included management positions in the broadcasting industry.

Mr. Wheatman has a B.A. from Fairleigh Dickinson University and an M.S. in communications from Boston University, and holds graduate certificates in management and telecommunications from Harvard and Golden Gate University.



# QUALITY CONTROL PROOFREADING SIGNOFF

DESCRIPTION

FOI Presentation U.K.

PROJECT CODE

EC04-VW1

AUTHOR

Ureter Wheatman

DATE TO  
PROOFREADER

TO BE PROOFED BY

INITIAL

DATE

4/25

*[Signature]*

*[Signature]*

4/25

FINAL Q.C.

4/25

*[Signature]*

4/25

☒ READY FOR PRINTER *with changes*

# INPUT

# PRODUCTION WORK ORDER

(Please fill out both sides)

DATE IN: 4/21/89 DATE DUE: 5/5/89 PROJECT CODE: ECO4  
AUTHORIZED BY: A/C ☐ NEW ☐ REPEAT ☒ REPEAT W/CHANGE

## WORK SPECIFICATIONS

DATE OF PRESENTATION: 5/10/89 LONDON

### Additional Information

- ☒ 35mm Slides  
☐ Foils  
☐ Exhibits  
☐ Questionnaire  
☐ Letter  
☐ Business Card  
☐ Note Paper  
☐ Newsletter  
☐ News Release  
☐ Form  
☐ Brochure  
☐ Cover Design  
☐ Other

Number of pages submitted \_\_\_\_\_ Text  
\_\_\_\_\_ Graphics

## SPECIAL INSTRUCTIONS

Some changes to existingA/C + SlidesA few new slides

## PRINTING SPECIFICATIONS

- Quantity/Slides/Foils \_\_\_\_\_  
Quantity/Hard Copy \_\_\_\_\_  
Paper Size \_\_\_\_\_ X \_\_\_\_\_  
Finished Size \_\_\_\_\_ X \_\_\_\_\_  
Number of Pages \_\_\_\_\_  
☐ Outside Printer  
☐ Photocopy  
☐ Single side  
☐ Double side  
☐ Three hole punch  
☐ Velobind punch  
☐ Trim to \_\_\_\_\_ X \_\_\_\_\_  
☐ Binding  
☐ Cover  
☐ Paper Color  
☐ Ink Color  
☐ Copyright Paper  
☐ Fold ☐ 1/2 fold ☐ 1/3 fold  
☐ Pad  
☐ Saddle Stitch  
☐ Box  
☐ Shrink Wrap  
☐ Staple ☐ Corner ☐ 2 on side

## MAILING SPECIFICATIONS

Envelope: ☐ No. 10 ☐ 9 x 12 ☐ 10 x 13 ☐ Reply Envelope Quantity \_\_\_\_\_  
☐ First Class ☐ Bulk ☐ Address Labels (Zip Code Order)

### Enclosures:

- ☐ Letter  
☐ Questionnaire  
☐ Newsletter  
☐ News Release  
☐ Form  
☐ Brochure  
☐ Business Reply Envelope  
☐ Other

### Distribution:

- ☐ Initial Mailing  
☐ Shelf Stock  
☐ NJ  
☐ DC  
☐ London  
☐ Paris  
☐ Japan

Quantity

TOTAL

MAIL \_\_\_\_\_ COPIES DIRECTLY TO:



## Electronic Data Intertrends

*NORTH AMERICA*

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Victor S. Wheatman  
EDI Program Manager  
INPUT

INPUT

NOTES:

*ELON-VW*



## EDI—The Year Past



Observations



*EDI as Religion*



"Missionary Sell"

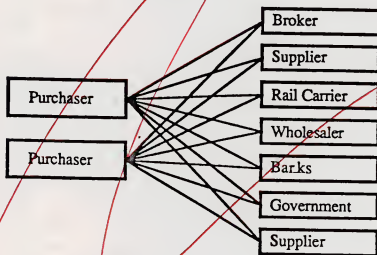
Dedicated Volunteers

INPUT

NOTES:

ECON-VW-4

## EDI LINKS CAN GET COMPLICATED



INPUT

NOTES:

JJJJ-VW-4



## Varieties of EDI

Mainline -	Purchasing Logistics EFT + Data
EMCS/ECS -	Medical Claims
Interface -	Insurance

INPUT

NOTES:

ECON-VW-7

2

## EDI TRANSMITS ELECTRONIC BUSINESS DOCUMENTS

- Machine Readable
- PO's, Invoices, etc.
- Also Health Care Claims, Others
- Not ATM, POS, or E-Mail

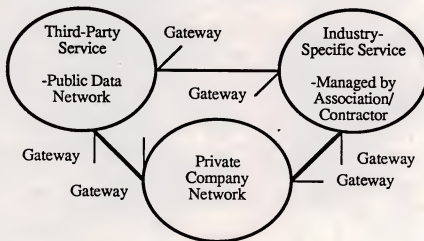
INPUT

NOTES:

ECON-1-3

INPUT

### THREE TYPES OF EDI NETWORKS



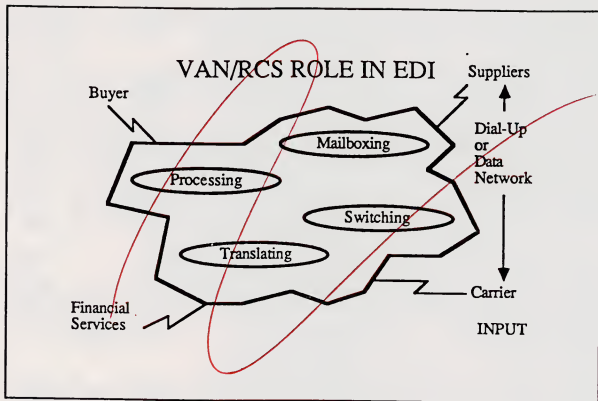
INPUT

NOTES:

*Recreate*

JJJJ-VW-31

INPUT



NOTES:

JJJJ-VW-5

INPUT

## GEIS

- Aggressive
- Worldwide Alliances, Agents
- EDI/~~EMC~~/PETROEX
- Design~~✕~~Express

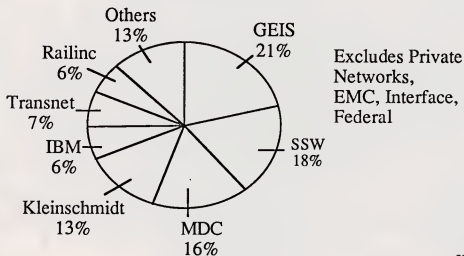
INPUT

NOTES:

*Recreate*

ETOK-16

## EDI Network/Processing Service Market Shares



INPUT

NOTES:

*BOTH Sides*

# SSW ordernet

- Grocery
- Drugs, Med/Surg
- Hard Goods
- Service Merchants
- Logistics
- Software

Telenet

reshoot

(SSPE-VW-1)

(can't find hard copy)

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000



# McDonnell Douglas EDI\*Net

- Grocery
- Logistics
- Cross Industry Certification
- Software
- EDI Version 2.0 - delayed
- "The Family Jewels"

reshoot

(SSPE-VW-2)

1. The first step is to identify the problem.

2. The second step is to define the objectives.

3. The third step is to develop a plan of action.

4. The fourth step is to implement the plan.

5. The fifth step is to evaluate the results.

(2. The second step is to define the objectives.)

## IBM

- Information Network—SNA
- Intercontinental Services
- Internal Use
- Insurance, Health Care, Electronics, Retail, Etc.

• *EXPEDITE Family*

INPUT

### NOTES:

*Recreate*

*Both Sides*

ETOK-17

## AT&T

- ~~Net 1000~~
- AT&T Mail—X.400 EDI
- CDC—RediAccess
- Turnkey Systems—RIVET

INPUT

NOTES:

*Recreate*

*EQAW-22*

ETOK-18

9

The Year Past

Service Entries

- AT & T
- Compuserve
- Martin Marietta
- Western Union
- SEARS

INPUT

NOTES:

Both Sides

ECON-VW-2

10

## EDI—The Year(s) Ahead

### Services—New Entrants

- ADP
- BOCs
- NDC
- EDS

### "Secondary" Players Find Niches

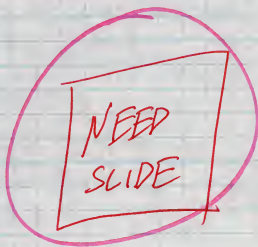
INPUT

NOTES:

ECON-VW-55

# HARBINGER

- Low Cost PC Software
- Interconnect Through Harbinger's Network
- Sold to Small Suppliers of Large Companies
- Adding EDI/EFT Services



(new)

2. 10/10/04

1. 10/10/04

2. 10/10/04

3. 10/10/04

4. 10/10/04

5. 10/10/04

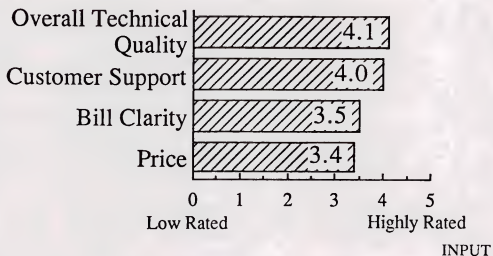
6. 10/10/04

7. 10/10/04



## User Rating—Third-Party Networks

Averages—All Networks

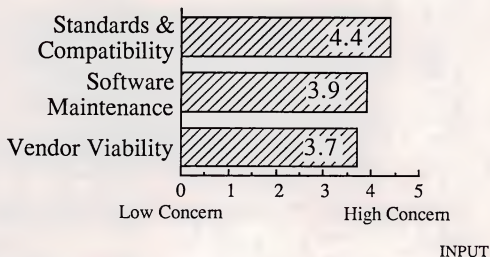


NOTES:

ECON-VW-33



## EDI User Issues and Concerns



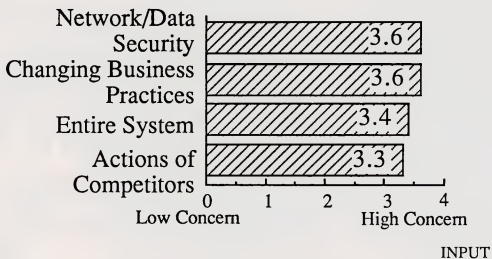
NOTES:

*Both Sides*

JJ88-VW1-41

14

## EDI User Issues and Concerns



NOTES:

ECON-VW-31

The Year Past

Software Entries

The "Majors": ASK, Pansophic, M+D  
Join MSA

The "Minors": Too Many to Mention

Missing: ~~Apple Software~~

INPUT

*Cross it  
off*

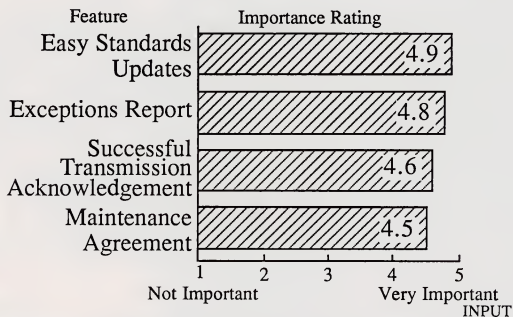
NOTES:

*Bo 79 Sides*

ECON-VW-3

16

## Software Features Importance



NOTES:

JJ88-VW1-42

17

## Leading EDI Software

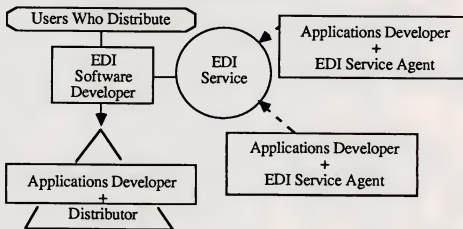
- GEIS
- SSW/ordernet
- Tran Settlements
- EDI, Inc.
- MSA
- Metro-Mark
- ACS
- Supply Tech







## PARTICIPANTS ARE FORMING ALLIANCES



INPUT

NOTES:

*recreate*

*EPAD-3*



## EDI In Discrete Manufacturing

Segment	Activity Summary
Auto	EDI Essential to Reduce Costs; "Big 3" Private Nets moving to Public Standards
Electronics	EDX Conforms to X12

INPUT

ESM1-11-39



## EDI In Discrete Manufacturing

Segment	Activity Summary
Telecommuni- cations Equipment	TCIF Just Starting - Promoting X12 and Bar Coding
Apparel	EDI Tied to "Crafted with Pride in the USA"

INPUT

usm1-04-39a

21



## EDI In Process Manufacturing

Segment	Activity Summary
Oil/Gas	COPAS Integrating EDI; Working on Unique Needs
Chemicals	CIDX Used by 30+ Companies

INPUT

usm11.vw-40a

22





## EDI In Process Manufacturing

Segment	Activity Summary
Paper Products	EMLINK on GEISCO - Trade Association Product
Metals	Growing List of ANSI Product Code Descriptors

INPUT



## EDI In Distribution

Segment	Activity Summary
Groceries	UCS Used by Most Large Firms
Office Products	Industry Association Project (ICOPS) Used by 40 Wholesalers, Large Dealers, and Manufacturers

INPUT



## EDI In Distribution

Segment	Activity Summary
Warehousing	WINS Standard is Similar to UCS
General	Large Distributors and Mass Merchandisers (McKesson, K-Mart) Using Private Networks

INPUT



## EDI In Transportation

Segment	Activity Summary
Rails	Large Companies Using Private Systems, Industry Association RCS, and Kleinschmidt
Trucking	60-200 Firms Using EDI
Ocean	U.S. Customs Promoting EDI to Cut Paperwork

INPUT





## EDI In Medical Products And Services

Segment	Activity Summary
Medical Supplies	Captive Systems Best Known: AHS
Optometry	TOP Network Helping Independents Compete Against Retail Chains

INPUT



## EDI In Medical Products And Services

Segment	Activity Summary
Pharmaceuticals	Wholesalers Active for 15 Years; Proprietary Standards Migrating to X12 for Entire Industry

INPUT

28



## EDI In Services

Segment	Activity Summary
Overnight Courier	EDI Used to Improve Customer Service to High-Volume Users
Banks	Growing Interest as Users, Uncertainty as Service Providers

INPUT



## EDI In Services

Segment	Activity Summary
Health Claims	UB 82 and HCFA Formats; Growing Usage
Insurance	Industry Association Improving Interface/ Methods between Independent Agents and Carriers

INPUT

30





EXHIBIT III-23

#1

31

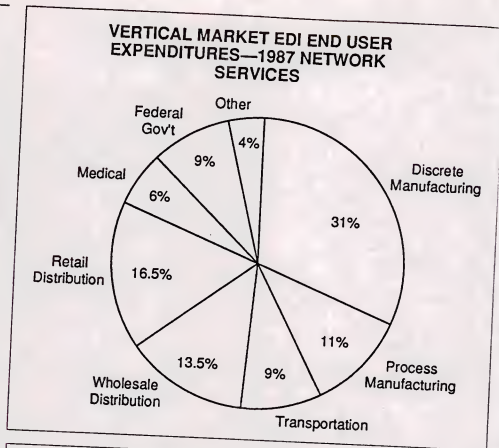
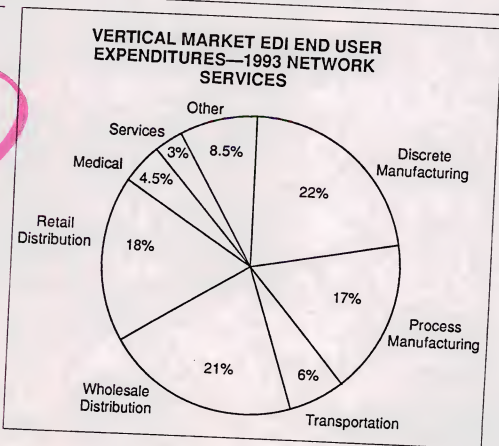


EXHIBIT III-24

#2





# EDI CASE STUDY

## LEVI-STRAUSS

INPUT

USM1-15-21

33



## Levi-Strauss

- 17,000 Retailers—200,000 Stores
- Retail Electronic Services—  
a Marketing Group
- Also Responsible for Supplier EDI

INPUT

USM1 - 22



Levi-Strauss

Key Concept:  
Capture POS Data  
to Drive Manufacturing



INPUT

35





Levi-Strauss

### Retail Services:

- Sell Through Analysis and Reporting System (STARS)
- Model Stock Management
- Retailer EDI (REDI)
- Purchase Order Reconciliation

INPUT

36



Levi-Strauss

## Benefits:

- Improved Turns
- Fewer Stock Outs
- Enhanced Retailer Relations

INPUT



# EDI CASE STUDY

## HEWLETT PACKARD

INPUT

usmi-00-93

√

38



H-P

- 56 Plants in 15 Countries
- Decentralized → Integrated
- Entrepreneurial/Complex

INPUT

11

39





H-P

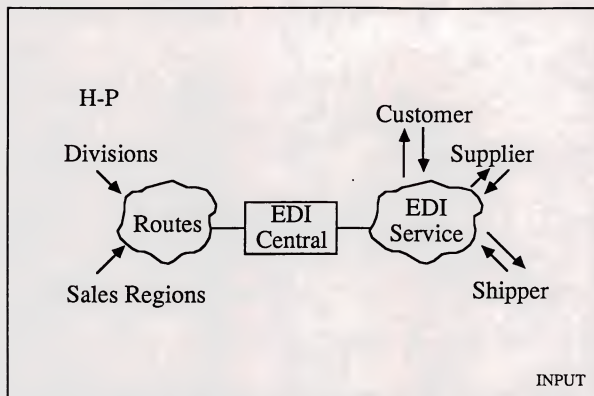
## EDI Approach

Steering Committee	-Policies
EDI Central	-Technical
Business Units	-Unit Interfaces
	-Implementation
	Partner Relations

INPUT

40







H-P

## EDI Goals

- Industry Leader
- Improve Customer Satisfaction
- "One Company" Image
- Eliminate Duplication

INPUT

42



H-P

## Recommendations

- Centralize Approach through Steering Committee
- Participate in Standards Groups
- Watch Secondary and Third-Order Issues
- "Spread the Gospel"

INPUT





EDI CASE STUDY

FIRST NATIONAL  
BANK OF CHICAGO

INPUT

4591-VV-26

44



First Chicago

## President's Mandate:

"We Will Do EDI"

- Purchasing
- Potential Service

INPUT

43

45



First Chicago

1985: No Supplier Was Ready

So: Loaned Software  
Underwrote Costs  
Free Training & Installation

INPUT

46



First Chicago

## Cost Benefit Analysis (1985):

Would Cost More—Not Less

- Dual Systems
- But Costs have Moderated

INPUT





First Chicago

## Implementation

- 65 Staff on Project
- "Bilingual" Users' Guide
- 25-Point Software and Network Evaluation

INPUT



First Chicago

## Transactions

	<u>Electronic</u>	<u>Paper</u>
1986	1,200	1 million
1987	4,800	
1988	20,000	50,000

INPUT

49



First Chicago

## Benefits

- \$2.5 Million in Annual Savings
- Enhanced Control/Monitoring—  
"Everything By Registered Mail"
- Experience Applied to EDI Services

INPUT

50



## Texas Instruments

- Centralized Worldwide
- T I's Own Network
- Provides "Free" Consulting
- Evaluating Graphics and Catalogs

INPUT

NOTES:

EQ40-6E-12

51





## WESCO

- Survey Customer Inventory Levels  
→ Automatic Replacement Orders
- Access Through Any Branch—  
Redistributes
- VAN or Direct

INPUT

NOTES:

ERA0-GE-13

52



## IBM

- 1991 Goal—2,000 EDI Suppliers
- Save \$60 Million Annually

## DEC

- EDI Executive Committee
- Electronic Store

INPUT

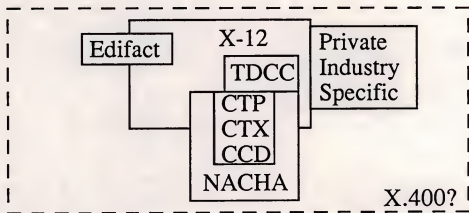
NOTES:

EQAA GE - 14

53



## EDI Standards Relationships



INPUT

NOTES:

EQAD-GE

54



## Standards Interfusion

Proprietary —————> X12  
Industry Specific

Pro: "Go with the Flow"

Con: Ease of Change

When: Now

INPUT

NOTES:

55





## Standards Interfusion

UCS  $\longleftrightarrow$  X12

Pro: Companies Now Using Both

Con: "Ain't Broke—Why Fix It?"

When: 2-5 Years

INPUT

NOTES:

56



## Standards Interfusion

TDCC  $\longleftrightarrow$  X12

Pro: Would Solve Coordination  
Problems

Con: Work Load Issues

When: 4-10 Years

INPUT

NOTES:

EQAD-GE-9

51



## Standards Interfusion

X12 ↔ Insurance  
(IIR/Acord)

Pro: Useful in Mortgage Banking,  
Transportation, Others?

Con: Coordination Issues

When: 2 Years (Real Estate)

INPUT

NOTES:

58



## Standards Interfusion

X12—→Edifact 400

Pro: Edifact—"The True Faith"

Con: X.400 Cycle Is 4 Years  
Varieties of X.400?

When: 2-10 Years

INPUT

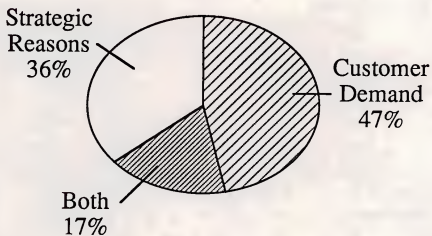
NOTES:

59





## Why Was EDI Implemented?



INPUT

NOTES:

*Both  
sides*

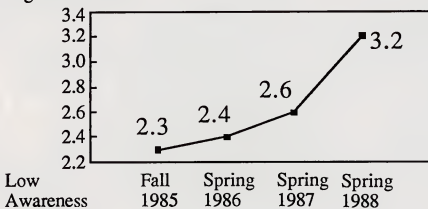
ECON-VW-26

5460

Forecast Factors

## EDI Awareness Is Growing

High Awareness



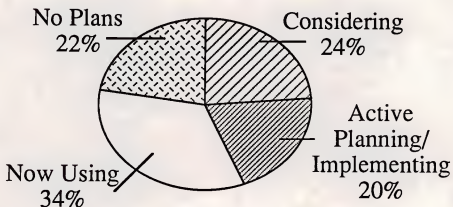
INPUT

NOTES:

ECON-VW-36

Forecast Factors

# EDI Status (IS Managers)



INPUT

NOTES:

ECON-VW-37

803  
508  
—

5662

Forecast Factors

Transaction Growth  
User's Average Response

1986-1987	1987-1988
181%	156%

INPUT

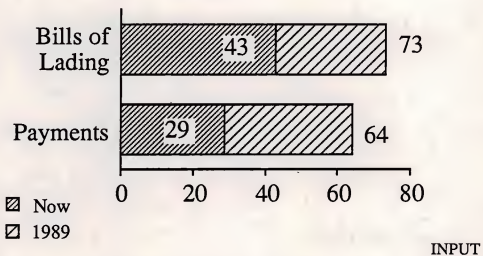
NOTES:

ECON-VW-38

5/ 63

Forecast Factors

### Transaction Type Growth (Percent)



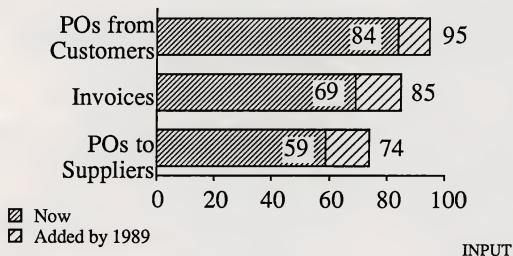
NOTES:

ECON-VW-40

88 64

Forecast Factors

## Transaction Type Growth (Percent)



NOTES:

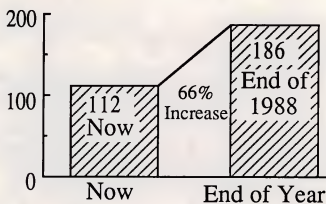
ECON-VW-39

*Bob  
Sales*

*8/9/85*

Forecast Factors

## Number of EDI Trading Partners



INPUT

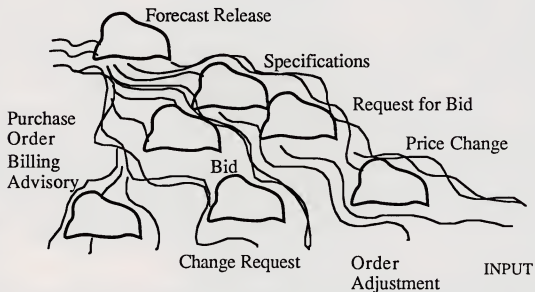
NOTES:

*Both sides*

ECON-VW-42

60 66

## The Cascade Effect

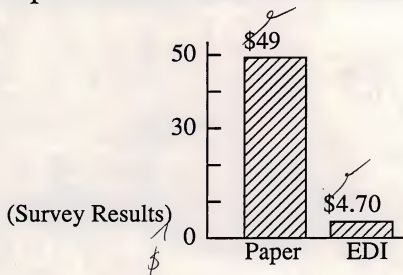


NOTES:

ECON-VW-41



## Paper versus Electronic Transactions



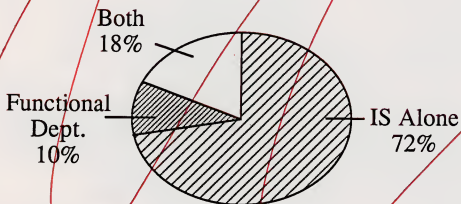
INPUT

NOTES:

ECON-VW-28

62 62

## Who Implements EDI (EDI Managers)

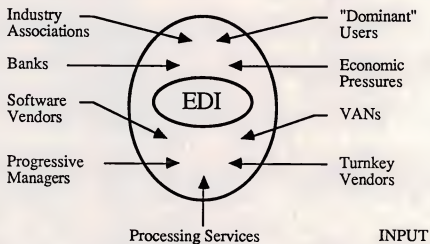


INPUT

NOTES:

ECON-VW-27

## FERTILIZING THE EDI EMBRYO



NOTES:

*Recreate*

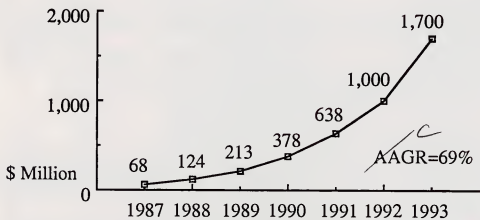
*Both sides*

ECON-1-4

68 69

INPUT

## EDI Network Services



Federal and Commercial - Includes EMC and Batch Interface

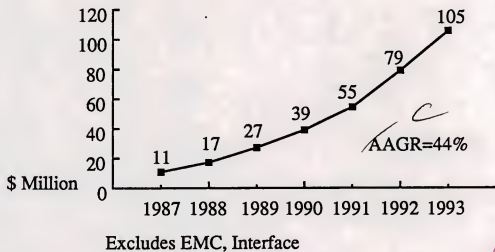
INPUT

NOTES:

JJ88-VW2-10

64 70

## Commercial EDI Software Market



INPUT

NOTES:

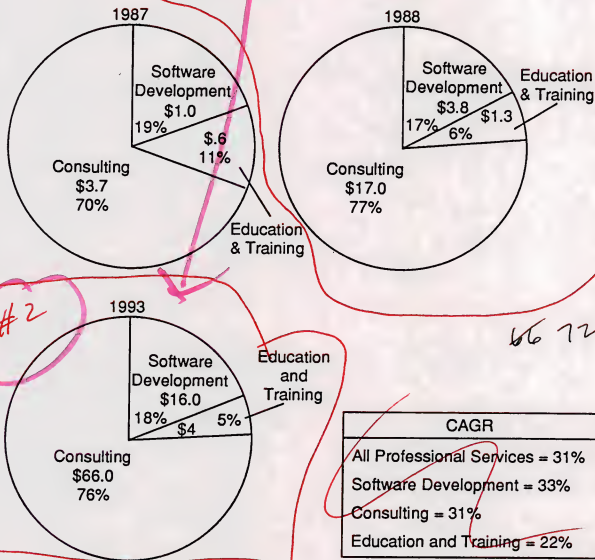
ECON-VW-46

45 21



EXHIBIT VI-6

# ED I PROFESSIONAL SERVICES— COMPONENT PROPORTIONS

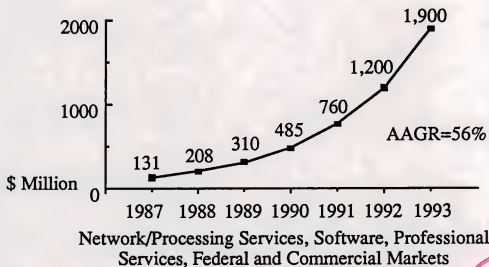


Note: EDI Systems Operation Market—Negligible.  
Dollar figures are in millions of dollars.





## EDI Market Forecast



INPUT

NOTES:

ECON-VW-43



## D

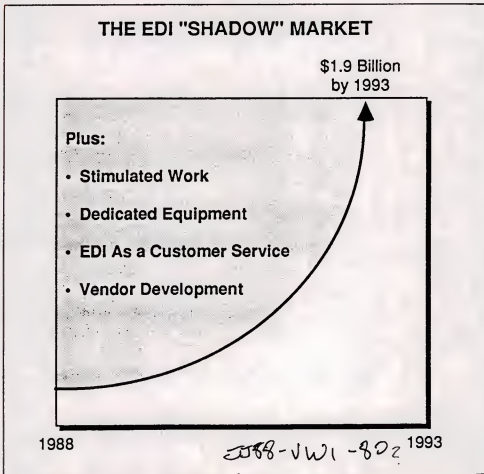
EDI-Driven User  
Expenditures—The  
“Shadow” Market

As reported in Chapter III of this report, users surveyed by INPUT were asked to provide information on their internal activities and expenses in support of EDI systems and on their expenditures for “EDI-stimulated” development. In many cases, costs of EDI-stimulated work surpassed actual EDI project costs.

- The professional services component of the total market forecast is an estimate of EDI-development-related end-user expenditures, but excludes EDI-stimulated development.
- Also excluded from the market forecast are professional service and other expenditures by EDI service and software providers in developing their own offerings. Such activities do, however, represent market opportunities.

Exhibit VI-7 illustrates the “shadow” EDI market, representing internal development costs for both EDI and EDI-stimulated end-user developments and the other expenditures described.

EXHIBIT VI-7





ECO4-VW1 #

original code

## Record of Slide origination

ECO4-VW1 #

original code

1	ECOW-VW-4
2	" -7
4	JS88-VW2-4
9	EQAD-22
11	ECOW-VW-55
13	" -33
14	JS88-VW1-41
15	ECOW-VW-31
17	JS88-VW1-42
20	USM1-VW-39
21	" 39a
22	" 40a
23	" 40
24	" 41

2	USM1-VW-41a
26	" -42
27	" 43a
28	" 43
29	" 44a
30	" 44
33	" 21
34	" 22
35	" 23
36	" 24
37	" 25
38	" 33
39	" 34
40	" 35
41	" 37



ECO 4-VW1 #

Original Code

42 USM1-VW - 36

43 " - 38

44 " 26

45 " 27

46 " 28

47 " 29

48 " 30

49 " 31

50 " 32

51 ERAD-GE-12

52 " 13

53 " 14

54 " 1

55 " 10

ECO 4-VW1 #

Original Code

56 ERAD-GE-8

57 " 9

58 " 11

59 " 7

~~60 ECO 4-VW1 - 26~~~~61 " 36~~ stat #61~~62 ECO 4-VW1 - 37~~

63 " 38

64 " 40

65 " 39

66 " 42

67 " 41

~~68 " 28~~

